EFFECTS OF HYPNOTHERAPY ON MALIGNANCY AND ASSOCIATED CONDITIONS

Synopsis

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(1.1) SIGNIFICANCE OF THE STUDY

"The mind is an instrument that can be tuned and controlled as easily as a musician can tune and control a fine instrument."

-Charles Collins

In the present era cancer is one of the major growing diseases in human being. In 2007, cancer claimed the lives of about 7.6 million people in the world (American Cancer Society). According to WHO death from cancer worldwide are projected to continue to rise to over 11 million in 2030. There are over 100 different types of cancer and each is classified by the types of cell that is initially affected.

When damaged cells divide uncontrollably to form lumps or masses of tissue called 'tumors'. There are two types of tumors that harm the body. They are malignant and benign tumor. Only the malignant tumors refer to cancerous cells that have the ability to spread to other sites in the body or to invade and destroy tissues. Malignancy is the pathological term for cancer. Cancer is a class of disease characterized by out of control cell-growth. It can develop in almost any part of your body. Usually, Cancer cells are formed continuously in the organism. It is estimated that there are about 10,000 cancer cells at any given time in a healthy person. This process is completely natural. Then the question arises here that why some of these results in macroscopic-level cancers and some don't. The scientific investigations of this field give the answer of it and suggest that not all damaged cells can multiply and many of them die quickly and those which have the potential to divide and form cancer are effectively destroyed by the various mechanisms available to the immune system. This process takes place continuously. Therefore cancer develops if the immune system is not working properly and/or the amount of cells produced is too great for the immune system to eliminate.

There are many types of factors which can cause to develop cancer in human being like environmental (chemical carcinogens as tobacco, x-rays etc.), genetic and most importantly psychological factors (as stress). The main assumption of this research is that role of psychological factors are most important in developing cancer. In his renowned book "Psychology", Baron (2001) describes that a deadly class of risk factors are behaviors within our life style that our increase our exposure to carcinogens. Medical doctor and cancer surgeon Hamer (1935) suggests that real cause of cancer and other diseases is an unexpected traumatic shock for which we are emotionally unprepared. Inadequate emotional expression- especially of negative feelings can have an adverse effect on the progression of certain types of illness such as cancer. In book "The Healer Within: The New Medicine

of Mind and Body" Locke and Colligan (1997) quote Laurence LeShan who declared that there is a cancer personality. Interviews he conducted with hundreds of cancer patients underscored a behavior pattern. Frequently, they were people who were long-suffering, who preferred to repress their hostile feelings, and who were typed with having a low sense of self-worth. And prior to the diagnosis, many had experienced a personal loss such as a death or a divorce (Dr Magne, 2006).

Researches, conducted in this field, revealed that chronic stress leads to enlarged adrenal glands and the thymus gland, the producer of T-lymphocytes used to fight cancer, is very small. Chronic stress leads to illness. When we are stressed the hypothalamus secretes a hormone which causes the adrenal glands to manufacture cortisol. In the long run, it is a suppressor of the immune system. It prevents the formation of new immune cells, and inhibits the activity of the ones already in the system (Dr. Magne, 2006). This is the neuropsychological mechanism that goes on in human body during stress. It is cleared that stress hormones suppress the immune system of a person and he will be more prone to develop cancer.

Since last decades, as cancer is spreading much rapidly worldwide, scientific researches regarding its treatment are also being conducted by researchers & scientists. Currently the traditional treatments of cancer are available in medical science likely as radiation therapy, chemotherapy, surgery etc. But these medical treatments have some drawbacks. Among all those, one of them is that all the treatments are very expensive and thus it is beyond the paying capacity of any poor people. Cancer doses not discriminate between rich & poor even poor people can be affected by with this illness. So, here it is a matter of concern that how a poor person, who is suffering from cancer, will get advantage of these expensive treatments. The other drawback is that all those treatments remove or treat only cancer cells and not the cause. The eminent biophysicist Dr. Mieszkowski (2006) stated that traditional medical treatments are very good in detecting and monitoring cancer, but it is very poor and ineffective in the treatment of cancer. One more demerit of those treatments is seen that after taking drastic medical treatments people with cancer often experience some physiological disturbances like chemotherapy related- nausea and vomiting etc. Ultimately we reach the same place from where we had started…*"Cancer… Sorry! There is no concrete solution available for it."* I think that may be the researchers, scientists or mentors are not paying attention on the real cause of cancer.

After the deep & long term investigation of 10 years on almost all type of cancer patients German scientist Dr. Hamer (1935) suggests that there are 100% correlation between the location of the cancer and the specific types of unresolved conflict and the psychotherapy is an important therapy for healing

cancer and found that when the specific conflict was resolved, the cancer immediately stopped growing at a cellular level. Psychosomatic therapy theorizes that there are psychological and emotional factors involved in both the onset and healing of physiological disease.

In this research hypnotherapy has been taken as an independent variable which is a healing technique to treat a wide range of neurotic disorders as well as physiological diseases. Hypnosis is a mental state usually induced by a procedure known as a hypnotic induction, which is commonly composed of a long series of preliminary instructions and suggestions. The reason why hypnotherapy can be relevant is because mind, body and spirit are interconnected and any treatment needs to take this into account. The extraordinary advances in medical science have been due to a greater understanding of how the body works and this has led to an emphasis on physical treatment (radiotherapy, chemotherapy etc), but the mind has its part to play as well (Browning, 2009). A special type of guided imagery, the Simonton Method, has been designed exclusively for use by cancer patients. Developed by oncologist O. Carl Simonton, this technique has been successful in serving as an adjunct therapy to conventional cancer treatment. Using the Simonton Method, the patient undergoes a period of deep relaxation under which he will mentally picture the cancer, the treatment destroying it, and most importantly, mobilization of the body's immune response fighting and destroying the cancer cells. A common exercise involves picturing the cells of the immune system as Pac-Men gobbling up and destroying the cancer cells (Shayhorn, 2002).

People with cancer often experience a lot of psychological disturbance as anxiety, depression, confusion, memory problem etc. Emotional distress after receipt of a diagnosis of cancer is common. Doubts and fears about the future, changes in social roles, and physical symptoms or functional losses resulting from the disease or its treatment are among the precipitating factors (Micheal et al., 2002).

Keeping in account the above mentioned details three dependent variables have been taken i.e. level of malignancy, level of cancer pain & mood states and one independent variable i.e. hypnotherapy for studying the impact of hypnotherapy on cancer patients.

(1.2) REVIEW OF LITERATURE

As described in previous chapter that there are three different dependent variables; level of carcinoma, mood states and level of cancer pain & one independent variable; hypnotherapy will be studied in my research. During the past decades various studies, researches, works have been done on the hypnotherapy. It is proved in many empirical studies or reviews that hypnotherapy is very efficient in balancing the mood states of cancer patients and alleviating the acute cancer pain. But particularly hypnotherapy is not examined as an alternative therapy for reducing the level of malignancy by scientists or researchers till now. Although few studies have been conducted regarding psychosomatic therapies by some pioneer researchers including oncologists and they concluded that psychosomatic therapies are very effective to cure cancer. So, indirectly, these scientific studies will support this research topic. So here, some of them are being cited as follows:

Related to Psychological Intervention to Cure Malignancy

- One of the most recent studies on psychosomatic cancer therapy comes from Germany. This is the pioneer research in this field and it is important to illustrate it in detail here.

Over the past ten years, medical doctor / surgeon Ryke-Geerd Hamer (1935) has examined 20,000 cancer patients with all types of cancer. He noticed that all his cancer patients seemed to have something in common: there had been some kind of psycho emotional conflict prior to the onset of their disease - usually a few years before - a conflict that had never been fully resolved. X-rays taken of the brain by cancer Dr. Hamer showed in all cases a 'dark shadow' somewhere in the brain. These dark spots would be in exactly the same place in the brain for the same types of cancer. There was also a 100% correlation between the dark spot in the brain, the location of the cancer in the body and the specific type of unresolved conflict. On the basis of these findings, Dr. Hamer suggests that when we are in a stressful conflict that is not resolved, the emotional reflex center in the brain which corresponds to the experienced emotion (e.g: anger, frustration, grief) will slowly break down. Each of these emotion centers are connected to a specific organ. When a center breaks down, it will start sending wrong information to the organ it controls, resulting in the formation of deformed cells in the tissues: cancer cells.

Dr Hamer started including psychotherapy as an important part of the healing process and found that when the specific conflict was resolved, the cancer immediately stopped growing at a cellular level. The

dark spot in the brain started to disappear. X-rays of the brain now showed a healing edema around the damaged emotional center as the brain tissue began to repair the afflicted point. There was once again normal communication between brain and body. A similar healing edema could also be seen around the now inactive cancer tissue. Eventually, the cancer would become encapsulated, discharged or dealt with by the natural action of the body. Diseased tissue would disappear and normal tissue would then again appear. According to Dr. Hamer the real cause of cancer and other diseases is an unexpected traumatic shock for which we are emotionally unprepared.

- A special type of guided imagery, the Simonton Method, has been designed exclusively for use by cancer patients.

Developed by oncologist O. Carl Simonton (1980), this technique has been successful in serving as an adjunct therapy to conventional cancer treatment. Using the Simonton Method, the patient undergoes a period of deep relaxation under which he will mentally picture the cancer, the treatment destroying it, and most importantly, mobilization of the body's immune response fighting and destroying the cancer cells. A common exercise involves picturing the cells of the immune system as Pac-Men gobbling up and destroying the cancer cells. The Simonton method requires that the patient interact directly with the disease, rather than maintaining a passive role as modern medical treatments do. It gives the patient self-esteem, confidence, and an improved outlook on their quality of life (Sheyhorn, 2002).

Related to Hypnotherapy to Decreasing Mood Disturbances & Cancer Pain:

After reviewing a lot of researches **Hartman and Zimberoff (2011)** concluded that hypnotherapy can be used in alleviating the chronic cancer pain. Hypnosis has been shown to be particularly helpful for wound debridement in burn wound care, for radiological procedures, for large core needle breast biopsy.

Montgomery et al. (2010) studied with objective to test the hypotheses that response expectancies and emotional distress mediate the effects of an empirically validated pre-surgical hypnosis intervention on postsurgical side effects (i.e., pain, nausea, and fatigue). Structural equation modeling revealed the following: (a) Hypnotic effects on postsurgical pain were partially mediated by pain expectancy ($p < .0001$) but not by distress ($p = .12$); (b) hypnotic effects on postsurgical nausea were partially mediated by pre-surgical distress ($p = .02$) but not by nausea expectancy ($p = .10$); and (c) hypnotic effects on postsurgical fatigue were partially mediated by both

fatigue expectancy ($p = .0001$) and pre-surgical distress ($p = .02$). The results demonstrate the mediational roles of response expectancies and emotional distress in clinical benefits associated with a hypnotic intervention for breast cancer surgical patients.

Sylvain and Randolph (2007) systematically and critically reviewed the evidence on the effectiveness of hypnotherapy for emesis, analgesia, and anxiolysis in acute pain, specifically in procedures with an emphasis on the period from 1999 to 2006. Clinical hypnosis in cancer settings provides symptom reduction (pain and anxiety) and empowers patients to take an active role in their treatments and procedures.

Elkins et al. (2006) explored using hypnosis for pain and anxiety management in 6 colonoscopy patients (5 men, 1 woman) who received a hypnotic induction and instruction in self-hypnosis on the day of their colonoscopy. Patients' levels of anxiety were obtained before and after the hypnotic induction using Visual Analogue Scales (VAS). Results suggest that hypnosis appears to be a feasible method to manage anxiety and pain associated with colonoscopy, reduces the need for sedation, and may have other benefits such as reduced recovery time.

Richardson, et al. (2006) systematically reviewed and critically appraised the evidence on effectiveness of hypnosis for procedure-related pain and distress in pediatric cancer patients. A comprehensive search of major biomedical and specialist complementary and alternative medicine databases was conducted. Studies report positive results, including statistically significant reductions in pain and anxiety/distress, but a number of methodological limitations were identified. Systematic searching and appraisal has demonstrated that hypnosis has potential as a clinically valuable intervention for procedure related pain and distress in pediatric cancer patients.

In the words of **Rajasekaran, Edmonds, & Higginson (2005),** "The aim of this review was to find the evidence for or against the use of hypnotherapy in the treatment of symptoms in terminally ill adult cancer patients. A total of 27 papers were evaluated. The 27 papers comprised a randomized controlled trial, an observational study, a retrospective questionnaire and 24 case studies. Hypnotherapy was used to treat a variety of symptoms, including pain, anxiety and depression."

Maurizio, Francesco & Claudio (2005) designed their study to establish whether a single sitting of hypnosis during the preoperative period would reduce postoperative anxiety levels (both state and trait anxiety) and to reduce the perception of postoperative pain (both its sensory and affective components). Forty-two patients from the Surgery and Orthopedics wards, who were to undergo surgery, were randomly assigned either to an experimental group (where preoperative hypnotic

treatment was carried out during the twenty-four hours preceding the operation) or to a control group (with no particular preoperative treatment). After the carefully intervention of hypnosis the patients from the experimental group showed lower levels of anxiety (both state and trait) and lower pain perception in the first two days after the operation (both in the sensory and affective components) compared to the patients from the control group.

Peynovska, et al. (2005) studied the benefits of Hypnotherapy, as a supplement therapy in the management of terminally ill patients At the end of the study data was analyzed to evaluate the effect of hypnotherapy on the individual quality of life, life expectancy, cost savings to the hospital in terms of reduced medication and need for medical care.

Liossi & Haura (2003) investigated the efficacy of a manual-based clinical hypnosis intervention in alleviating pain in 80 pediatric cancer patients (6-16 years of age) undergoing regular lumbar punctures. Patients in the hypnosis groups reported less pain and anxiety and were rated as demonstrating less behavioral distress than those in the control groups. Direct and indirect suggestions were equally effective, and the level of hypnotizability was significantly associated with treatment benefit in the hypnosis groups. The study indicates that hypnosis is effective in preparing pediatric oncology patients for lumbar puncture.

Lynch (1999) suggests that hypnosis, or self-hypnosis, is a simple, portable, self- contained therapeutic technique by which they themselves can exert some control over their illness. This sense of mastery is often as important as the benefits of symptom and pain management in allaying the dread and depression which are often accompaniments to the diagnosis of cancer.

Genuis (1995) reviewed a lot of empirical studies and winded up that hypnosis can be used in ameliorating side effects of medications, such as nausea, vomiting, and fatigue. Studies have demonstrated that hypnosis can be an effective means for some cancer patients to alleviate nausea and vomiting associated with chemotherapy, including with children.

Jacknow, Tschann, Link, & Boyce (1994) conducted a prospective, randomized, and controlled single-blind trial in 20 patients receiving chemotherapy for treatment of cancer to study the effectiveness of hypnosis for decreasing antiemetic medication usage and treatment of chemotherapy-related nausea and vomiting in children with cancer. Subsequently hypnosis group experienced less anticipatory nausea than the control group at 1 to 2 months post-diagnosis ($p < .02$). Results suggest self-hypnosis is effective for decreasing antiemetic medication usage and for reducing anticipatory nausea during chemotherapy.

Levitan, (1992) reviewed of the past researches regarding hypnotherapy used as a therapeutic tool for treating some psychological and physiological symptoms in cancer patients and concluded that hypnosis has proven to be extremely valuable in the treatment of cancer patients. Specific applications include: establishing rapport between the patient and members of the medical health team; control of pain with self-regulation of pain perception through the use of glove anesthesia, time distortion, amnesia, transference of pain to a different body part, or dissociation of the painful part from the rest of the body; controlling symptoms, such as, nausea, anticipatory emesis, learned food aversions, etc.; psychotherapy for anxiety, depression, guilt, anger, hostility, frustration, isolation, and a diminished sense of self-esteem; visualization for health improvement; and, dealing with death anxiety and other related issues. Hypnosis has unique advantages for patients including improvement of self-esteem, involvement in self-care, return of locus of control, lack of unpleasant side effects, and continued efficacy despite continued use.

According to **Simonton, Matthews & Sparks (1980)** markedly improved and durable survival in cancer patients who received weekly supportive group counseling and self hypnosis training plus conventional medical therapy, versus conventional therapy alone.

Above are the few researches, conducted in the field of psycho-oncology, psychiatry, psychonuroimmunology etc. These strongly support my research topic in both ways; directly or indirectly.

(1.2) RESEARCH PROBLEM

Do the exposures of hypnotherapy affect the level of malignancy and associated conditions?

(1.3) OBJECTIVES OF THE STUDY

There are few objectives of this study as following:

(i) To critical study of hypnotherapy in affecting the level of malignancy, cancer pain & mood states.

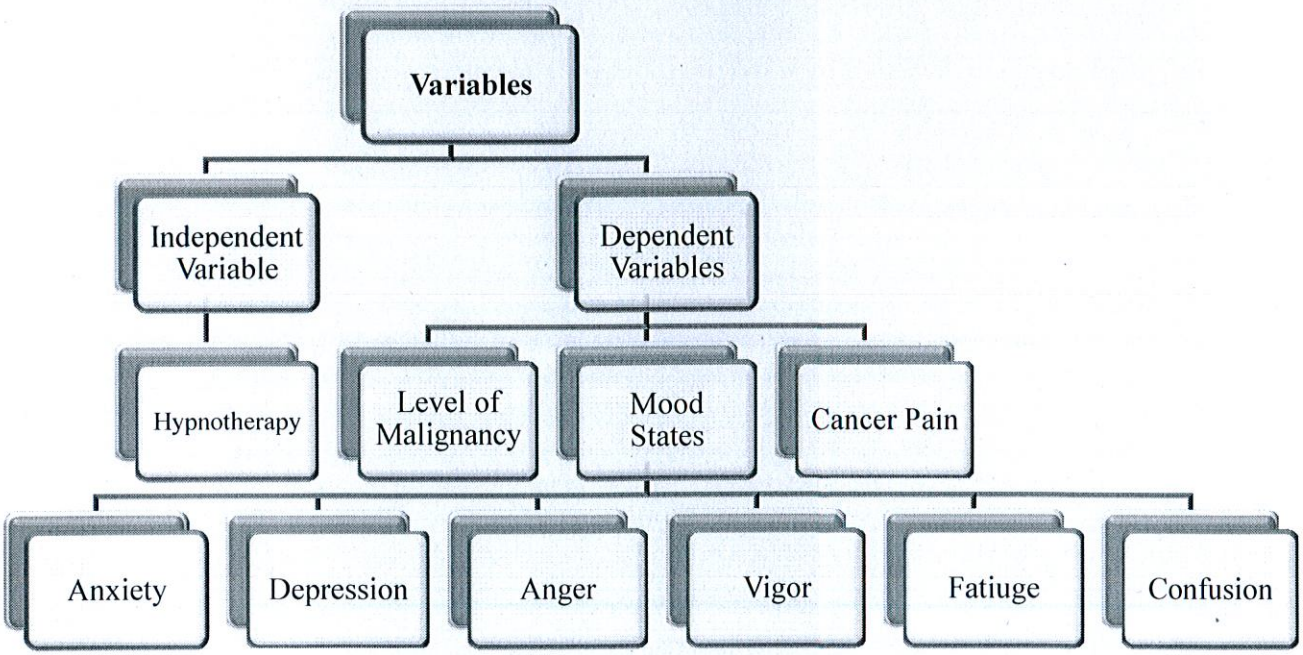
(ii) To assess the efficacy of hypnotherapy in reducing the level of malignancy.

(iii) To assess the efficacy of hypnotherapy in decreasing the mood disturbances in cancer patients.

(iv) To assess the efficacy of hypnotherapy in alleviating the cancer pain.

Momentously by this study I want to explore the role of the power of human mind in removing the physiological disease.

(1.4) DESCRIPTION OF VARIABLES



(1.6) HYPOTHESES

On the basis of researches done in relation to psychosomatic therapy as a tool for curing the cancer it is more appropriate to formulate null hypothesis rather than directional hypothesis regarding hypnotherapy.

Hypothesis (1): There is no effect of hypnotherapy on the level of cancer.

On the basis of plethora of researches done in relation to the hypnotherapy as a alternative treatment in decreasing the cancer pain and mood disturbances it is more appropriate to format directional hypotheses rather than null.

Hypothesis (2): Cancer patients who receive hypnotherapy will show a greater alleviation in cancer pain than patients not receiving hypnotherapy.

Hypothesis (3): Cancer patients who receive hypnotherapy will show a greater reduction in overall mood disturbances than patients not receiving hypnotherapy.

According to six dimensions:

Sub-hypothesis (1): Cancer patients who receive hypnotherapy will show a greater reduction in anxiety than patients not receiving hypnotherapy.

Sub-hypothesis (2): Cancer patients who receive hypnotherapy will show a greater improvement in depression than patients not receiving hypnotherapy.

Sub-hypothesis (3): Cancer patients who receive hypnotherapy will show a greater decrease in anger than patients not receiving hypnotherapy.

Sub-hypothesis (4): Cancer patients who receive hypnotherapy will show a greater increase in vigor than patients not receiving hypnotherapy.

Sub-hypothesis (5): Cancer patients who receive hypnotherapy will show a greater reduction in fatigue than patients not receiving hypnotherapy.

Sub-hypothesis (6): Cancer patients who receive hypnotherapy will show a greater decrease in confusion than patients not receiving hypnotherapy.

METHOD

(2.1) Research Design: Pre-Post Design with a Control Group (Mixed Between-Within Group Design)

(2.2) Sample & Sampling: Simple Random Sampling

In this research, sample would be divided in two groups i.e., experimental and control group through randomization. 20 participants will be included in experimental group as well as control group. Therefore, total sample size would be 40 which can be drawn from cancer population through accidentally. Intervention will be provided to only experimental group not to control group.

(2.3) Tools:

(i) For measuring the level of malignancy **traditional medical tests** will be used.

(ii) **Numerical Rating Scale (NRS)** will be used for measurement of level of cancer pain. Many researches have been done to evaluate the psychometric properties of the NRS-11. For instance, Miro, Castarlenas & Huguet (2009) studied its validity with research title *"Evidence for the use of a numerical rating scale to assess the intensity of pediatric pain"* and concluded that the NRS-11 has shown an acceptable level of validity for assessing pain intensity in cancer patients. One more study was done by Brunelli, Zecca et al. (2010) with title *"Comparison of numerical and verbal rating scales to measure pain exacerbations in patients with chronic cancer pain"*. They suggested that in the measurement of cancer pain exacerbations, patients use NRS more appropriately than VRS and so NRS should be preferred to VRS in this patient's population.

(iii) For evaluating the mood states of participants, **Profile of Mood States (POMS)** will be employed. The POMS is a 65-item scale which assesses six affective dimensions like anxiety, depression, anger, vigor, fatigue and confusion. It was developed by Maurice, Douglas et al (1971). The test-retest reliability of POMS is 0.74. It has been widely used in the assessment of mood changes resulting from a variety of interventions due to its responsiveness and has been used extensively with cancer populations. For instance, Carlson, Goodey et al. (2004) and Speca, Patel et al. (2003) have applied the POMS in their study for measuring the mood states in breast and prostate cancer patients.

(iv) A suitable **suggestibility test** will be applied on participants for categorizing them into the analytical and non-analytical. This will help to select an appropriate induction technique accordingly.

(v) Case history form

(2.4) Procedure: (For Experimental Group Only)

First of all the participants will be evaluated on DVs (malignancy, cancer pain and mood states) before intervention was provided. Then the suggestibility of each participant will be tested by using Suggestibility Scale.

After that they will be educated about the significant role of human mind in removing the physiological diseases, specifically cancer, as well as psychological disturbances so that each participant could gain the belief about hypnotherapy. It will help in making good rapport with researcher also. Collectively & more importantly each cancer patient will be informed about the location of target organ, where cancer has been developed, through animated movie if I get it easily from internet or through pictures so that they could easily imagine the target organ of their body under the trance state. This whole process is called 'psycho-education'.

Later on hypnotherapy sessions will be started. For each patient 10-15 sessions will be provided which would be sufficient to see the desired effect on DVs. After intervention again each patient will be examined on DVs (Post-analysis) and then obtained data will be analyzed by using statistical parametric tests.

(2.5) Intervention Protocol:

Step I: **Testing the Suggestibility**- Level of suggestibility of each participant will be observed by using standard suggestibility scale.

Step II: **Trance Induction**- Participants will be carried into trance state through specific induction technique (it will be decided later).

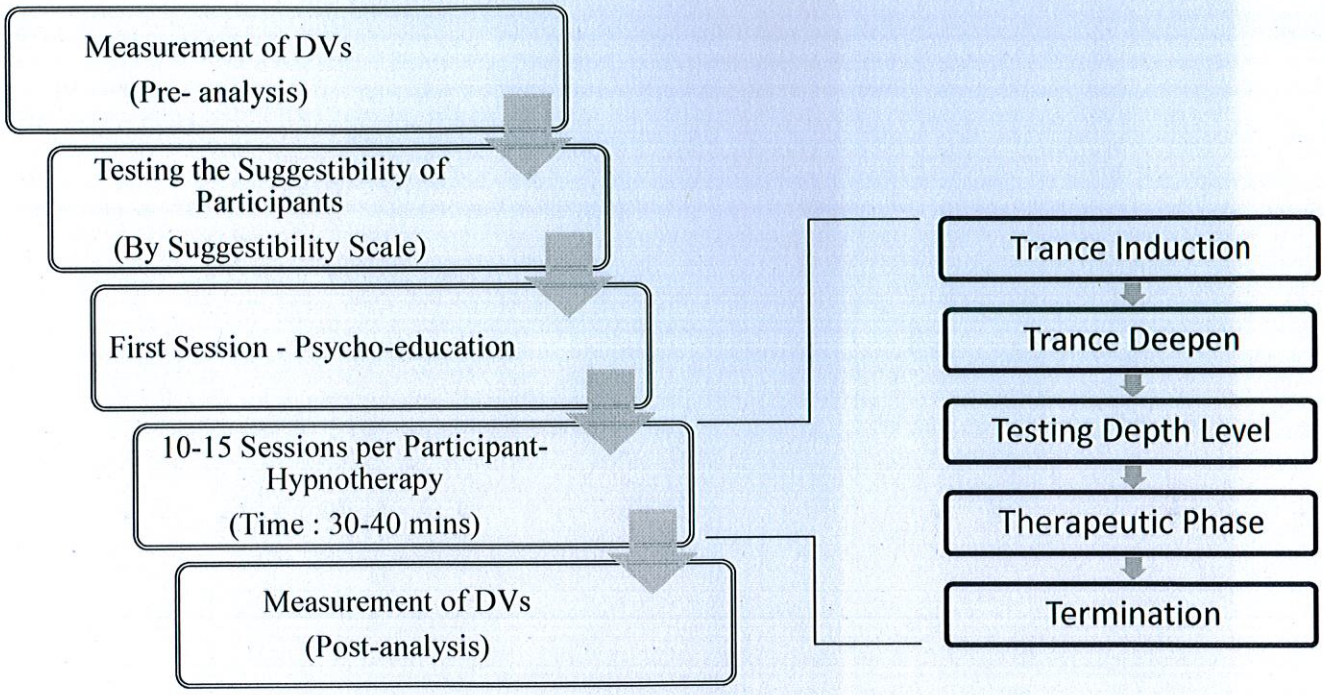
Step III: **Trance Deepen**- By using different deepeners they will achieve deeper hypnotic state. It will improve the efficiency of suggestions.

Step IV: **Testing the Depth Level**- After that depth level of trance will be checked via Aron's Depth Scale (six level of trance).

Step V: **Therapeutic Phase-** In this step the subconscious mind of an individual is imbued with specific suggestions (related to problems). (It will be decided later).

Step VI: **Termination-** At the end termination takes place.

Flow Chart:



For control group only pre and post analysis would be done. No intervention will be applied.

In this research individual analysis as well as group analysis will be carried out. Selected participants for individual analysis will be examined intensively through case history method.

Data Analysis: For analyzing the raw data **Paired t-test, Independent Sample t-test and other suitable statistical procedures** will be employed.

Results & Discussion: In this section results will be displayed and later on the interpretation & discussion will be carried out on the obtained results.

Implications:

- At present there are no any concrete solutions for the cancer in medical science. Therefore, this research is an effort towards this as it will consolidate hypnotherapy as a new & effective therapeutic technique for cancer which will not have any side effects as found in other traditional medical treatments.
- It will also be an alternative therapy for reducing the psychological disturbances in cancer patients which will improve the quality of life of people with cancer.
- This research will be a remedy not only in psychological perspective for cancer patients but also play a significant role in lessening the physiological disturbances like cancer pain etc.

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